



June 29, 2017

### Via Email and First Class Mail

Mr. Christos Tsiamis Remedial Project Manager – Gowanus Canal Site Emergency and Remedial Response Division United States Environmental Protection Agency, Region 2 290 Broadway, 20<sup>th</sup> Floor New York, New York 10007-1866

**Subject:** Monthly Progress Report No. 36

**Gowanus Canal Superfund Site** 

Unilateral Administrative Order (UAO) Docket No. CERCLA-02-2014-2001

Dear Mr. Tsiamis:

On behalf of the Gowanus Canal Remedial Design Group (RD Group), Geosyntec Consultants respectfully submits the May 2017 Monthly Progress Report (MPR). The MPR is a summary of actions and activities undertaken pursuant to the Administrative Order for Remedial Design executed on March 24, 2014 (the Order) for the Gowanus Canal Superfund Site. The RD Group intends to submit subsequent MPRs between the 15<sup>th</sup> day and the 30<sup>th</sup> day after the end of each month until termination of this Order, unless otherwise directed in writing by EPA.

If you have any questions, please do not hesitate to contact me.

Sincerely,

Howard Cumberland Project Coordinator

Attachment: May 2017 Monthly Progress Report

cc: Brian Carr, Esq., USEPA (via email & 1 hardcopy first class mail)

Robert Schick, Hank Willems NYSDEC (via email & 1 hardcopy first class mail)

Juliana Hess, CH2M (via email)

Gowanus Canal Remedial Design Group (via email)





## MONTHLY PROGRESS REPORT

Gowanus Canal Superfund Site USEPA Unilateral Administrative Order Docket No. CERCLA 02-2014-2001 Monthly Progress Report No. 36 Reporting Period: May 2017 Submittal Date: June 29, 2017

This monthly progress report, which documents remedial design activities completed at the Gowanus Canal Superfund Site during the reporting period, is submitted to the U.S. Environmental Protection Agency (EPA) and the New York State Department of Environmental Conservation pursuant to section E, paragraph 60 of the Administrative Order (Order). It has been prepared by Geosyntec on behalf of the Gowanus Canal Remedial Design Group (RD Group).

#### 1) Work Plans, Plans, and Other Deliverables

#### • Submittals

- o On May 3, 2017 the RD Group responded to several EPA communications:
  - In response to EPA communications dated April 10, 2017 and April 12, 2017 regarding the 4<sup>th</sup> Street Turning Basin (TB4) sediment removal, the RD Group informed EPA that the 100% design for the TB4 Pilot Study would be completed using the EPA-directed polygons for native sediment removal in TB4. Additionally, the RD Group provided dredging and backfill plan figures to be included in the TB4 100% Design Report as supporting materials.
  - In response to EPA communication dated April 10, 2017 regarding TB4 bulkhead design materials, the RD Group responded that EPA comments/directions would be incorporated into the 100% design package. EPA subsequently requested further clarification regarding the RD Group's answers to comments, to which the RD Group responded on May 8, 2017 to resolve the questions.
  - In response to EPA communication dated April 11, 2017 regarding future workshops, the RD Group provided responses to EPA comments on the subject of workshop intent, submittal of technical design materials, submittal of bulkhead design drawings, and submittal date of the 100% TB4 design. On May 8, 2017 EPA responded with a directive to provide bulkhead design drawings for TB4, to which the RD Group responded on May 10, 2017 that no further bulkhead designs were completed to date.
  - In response to EPA communication dated April 12, 2017 regarding the 3rd Avenue bridge, the RD Group provided responses regarding steps taken to obtain information about the 3rd Avenue bridge foundation, and anticipated general observations regarding investigations and remedial strategy around the bridge.
- o On May 4, 2017 the RD Group provided a delivery schedule for the 100% Design for the TB4 Pilot Study Report in response to EPA directives, dated April 10, 2017, that

- specified revised final native sediment removal depths and bulkhead support design for TB4. The delivery schedule targeted May 19, 2017 for submittal of the TB4 100% Design.
- On May 17, 2017 the RD Group provided to EPA the revised addendum to the PD-10/21 report following receipt of the Cherry Island facility sampling protocol. Details pertaining to the communication between the RD Group and EPA on the revised addendum to the PD-10/21 report are provided below.
- On May 19, 2017 the RD Group provided EPA with the 100% Design for the TB4 Pilot Study including Response to EPA Follow-up Comments on the 50% TB4 Design.
  - On May 22, 2017 EPA requested clarification regarding the May 19, 2017 submittal (described below). On May 23, 2017 the RD Group clarified that the 100% Design for the TB4 Pilot Study was submitted prior to review of the EPA directive, and a response was in preparation to the directive.

#### • In Agency Review

See attached approval status tables (Tables 1 and 2) for approval status of work elements. Yellow highlighted rows show where further coordination with EPA is required.

## Comments or Approvals Received from EPA this Period

- On May 4, 2017 EPA approved drawings indicating hot-spot excavation polygons for the TB4 dredging pilot scope of work. Additionally, EPA confirmed that the RD Group is not required to backfill hot-spot excavation areas with oleophilic clay material, only with suitable clean backfill. Full final comments on the 50% Design Report were anticipated to be sent by May 8, 2017 to the RD Group.
- o On May 8, 2017 EPA provided follow-up comments and final directives for the 50% Design Report for the TB4 pilot study.
- o On May 8, 2017 EPA provided comments on the PD-10/21 addendum seeking several clarifications regarding the Clean Earth facilities and the incorporation of the addendum findings into TB4 planning. EPA requested submission of a revised document in accordance with the comments listed above by May 15, 2017.
  - On May 16, 2017 the RD Group provided responses and supporting documentation for the comments listed above from EPA, and also informed EPA that a response from Clean Earth for the requested information regarding the Clean Earth Cherry Island facility was outstanding. The RD Group requested a resubmittal date of May 17, 2017 for the revised addendum to the PD-10/21 report to allow for inclusion of the Cherry Island facility sampling protocols. On May 17, 2017 the RD Group provided the revised addendum to the PD-10/21 report following receipt of the Cherry Island facility sampling protocol.
  - On May 22, 2017 EPA granted approval of the PD-10/21 addendum.
- o On May 8, 2017 EPA granted approval of the PD-15 Final Report.
- o On May 10, 2017 EPA granted approval of the PD-17 Final Report.

- o On May 19, 2017 EPA directed the RD Group to plan and proceed in accordance with the EPA-developed schedule. The EPA schedule requires the RD Group to bid and subcontract the bulkhead construction separately from dredging and capping work immediately upon receipt of EPA approval of the bulkhead design drawings.
  - On May 25, 2017 a phone conversation between EPA and the RD Group occurred. EPA provided a summary of the phone conversation via email correspondence to the RD Group on May 25, 2017, including:
    - The understanding that the RD Group intends to request separate bids for construction of bulkheads and for dredging/capping as directed by EPA;
    - o That the RD Group intends to request bids for conducting the work as a whole by a single contractor;
    - The understanding that due to the length of time required for manufacturing and delivery of the sheet piles, the two approaches may not have a significant schedule difference.
  - On May 26, 2017 the RD Group responded to the EPA correspondence dated May 19, 2017:
    - o The RD Group reiterated that the RD Group will proceed with contractor procurement and implementation sequencing in a manner consistent with the approach outlined by EPA.
    - o The RD Group specified its intent to release the bid for the full 100% Design scope on May 26, 2017, followed thereafter by a bid addendum detailing the bulkhead-only bid and the dredging/capping bid.
    - o The RD Group qualified that the RD Group will proceed in a manner consistent with EPA's approach, but due to several logistical concerns (i.e. timeframe of sheet pile delivery), the schedule for mobilization outlined in the TB4 100% design package may be equivalent to the mobilization schedule associated with implementation of the bulkheads-only scope. The RD Group will proceed with procurement of the sheet piled immediately upon EPA approval of the TB4 100% design and provide EPA with mobilization approaches for bulkhead-only and full TB4 scope for EPA and the RD Group to evaluate and decide on the most advantageous way to proceed with implementation. The RD Group also noted that they cannot commit to TB4 completion in 2017.
- On May 31, 2017 EPA provided comments on the 100% Bulkhead design package for TB4 and requested RD Group responses in accordance with the Final Schedule Directive provided on May 19, 2017.

#### 2) Field Activities

• As part of the supplemental field investigation scope of work for the TB5 investigation, water level measurements were collected in wells at the TB5 location.

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A site visit to meet with property owner of the former American Can building to discuss
the TB5 supplemental investigation and request site walk of basement for indications of
storm sewer was completed.

#### 3) Data/Results Received and/or Generated

• Groundwater levels collected from the TB5 supplemental investigation were under review.

#### 4) Health & Safety Update

• No health and safety incidents or updates occurred during this reporting period.

## 5) Problems Encountered/Efforts to Mitigate Delays

• The RD Group decided to procure the steel sheet piles for bulkhead support in advance of contractor selection to maintain schedule given the 12 to 14-week delivery timeframe. Procurement is expected to occur in June 2017.

#### 6) Schedule Deviations

- An update to the design schedule for the TB4 Pilot Study was provided to EPA on May 4, 2017, noting the submittal of the TB4 100% design extended to May 19, 2017.
- Updated RTA1 schedule materials have been provided to EPA on February 28, 2017 and on March 15, 2017.
- The RD Group is awaiting EPA comments on the Draft Programmatic Agreement for Cultural Resources developed in collaboration with EPA contractors. The Draft Programmatic Agreement was provided on January 19, 2017. The Programmatic Agreement was intended to manage cultural resources during the TB4 Pilot Study but instead the RD Group will utilize the existing Cultural Resources Management Plan developed under PD-14. Incorporation of the Programmatic Agreement into the RTA1 65% Design is expected. The 65% design for dredging is scheduled to begin in June 2017.
- The RD Group is awaiting EPA comments on the results of the RTA1 PD-8 NAPL Mobility investigations for confirmation of ISS boundaries in RTA1. Response to EPA comments on PD-8 and other EPA-requested materials were provided by the RD Group to EPA on or before March 28, 2017. The results of the PD-8 work are to be incorporated into the 65% design for RTA1, which is scheduled to begin in June 2017. The ISS 65% design cannot begin without final correspondence from EPA.

## 7) Planned June 2017 Activities

• The RD Group plans to proceed with contractor selection and procurement activities for the TB4 Pilot Study in parallel with EPA review of the design.

## 8) Access Coordination

 On May 8, Drinker Biddle provided draft template access agreements and related documents to EPA counsel for review and comment. These template documents are intended to be distributed by EPA to property owners within the TB4 pilot study boundaries. EPA counsel provided comments on these documents on May 19. Final packages for each property are expected to be returned to EPA for distribution to owners is anticipated in June.

- Access was obtained for transducer data downloads and well gauging, which occurred at the following properties on May 10:
  - o 270 Nevins Street/525 Union Street
  - o 242 Nevins Street
  - o 160 3rd Avenue
  - o 37 9th Street
  - o 213 6th Street
- The RD Group is coordinating access for the following activities in June:
  - o Site walk for potential TB4 bidders at Whole Foods;
  - o Site walk(s) with H2M for future preconstruction surveys (properties TBD; at a minimum, Whole Foods);
  - o Site visit with 230/232 3rd Street (formerly American Can);
- The RD Group is coordinating with ConEd to obtain utility information.
- A FOIL request for geotechnical information at certain properties in RTA 2 was returned by NYC Buildings; unfortunately, the DOB file version is not legible. The RD Group will attempt to obtain the information from the property owner.

## • Access agreements were previously obtained at the following properties:

- o 270 Nevins Street (425-1) (RTA1) (270 Nevins St. Properties LLC)
- o 242 Nevins Street (418-1) (RTA1) (242 Nevins St. Inc.)
- o 226 Nevins St. (411-24) (RTA1) (226 Nevins St. Corp.)
- o 525 Union Street (432-15) (RTA1) (Sackett River Corporation)
- o 68 5<sup>th</sup> Street (471-100) (RTA2) (Housing Preservation)
- o 459 Smith Street (471-200) (RTA2) (Vichar, Inc.)
- o 65 6<sup>th</sup> Street (990-138) (RTA2) (Keyspan Energy)
- o 76 6<sup>th</sup> St. (990-369) (RTA2) (SAG LLC)
- o 42 2<sup>nd</sup> Ave. (990-269) (RTA2) (CF [or C&F] Second Ave LLC)
- o 58 2<sup>nd</sup> Ave. (990-69) (RTA2) (CF [or C&F] Second Ave LLC)
- o 479 DeGraw St. (417-21) (RTA1) (Eponymous Gowanus, LLC; 3911 Lemmon Ave Assoc; Esbond Realty, LLC)
- o 37 9<sup>th</sup> Street (990-50) (RTA2) (Gowanus Holdings, LLC)
- o 386 3<sup>rd</sup> Avenue (979-5) (RTA2) (386 3<sup>rd</sup> Avenue Partners)
- o 22 2<sup>nd</sup> Ave. (990-1) (RTA2) (Richard Ribellino) Signed through EPA
- o 141 (or 173 on tax maps) 6<sup>th</sup> St. (979-23) (RTA2) (Maritime Estates Inc.)
- o 163 6<sup>th</sup> St. (979-18) (RTA2) (Petros Realty Corporation)
- o 160 3<sup>rd</sup> St. (466-19) (RTA2) (Empire Transit Mix)
- o 450 Union St. (438-7) (RTA1) (450 Union LLC)
- o Gowanus Canal (1025-1) (RTA2) (Hamilton Plaza Associates)
- o 12<sup>th</sup> St. (1025-18) (RTA2) (Hamilton Plaza Associates)

- o 1 12<sup>th</sup> St. Extension (1007-172) (RTA2) (Hamilton Plaza Associates)
- o 1 11<sup>th</sup> St. (1007-1) (RTA2) (Lowes)
- o 176 3<sup>rd</sup> St. (978-32) (RTA2) (Whole Foods)
- o 186 3<sup>rd</sup> St. (978-30) (RTA2) (Whole Foods)
- o 190 3<sup>rd</sup> St. (978-23) (RTA2) (Whole Foods)
- o 212 3<sup>rd</sup> Street (978-16) (RTA2) (Whole Foods Market Group Inc.)
- o 75 20<sup>th</sup> St. (635-13) (RTA3) (601 Sunset Owner, LLC)
- o 420 Carroll St. (453-1) (RTA1) (Carroll St. Holding)
- o 430 Carroll St. (453-21) (RTA1) (Carroll St. Holding)
- o 318 Nevins St. (439-1) (RTA1) (Nevins St. Holding)
- o 15 2nd Ave. (979-31) (RTA2) (15 2<sup>nd</sup> Ave.)
- o 213 6<sup>th</sup> St. (980-95) (former 5<sup>th</sup> St. TB) (U-Haul Intl. Inc.)
- o 167 6<sup>th</sup> St. (979-14) (RTA2) (Dykes Lumber Co Inc.)
- o 691 Court St. (496-50) (RTA3) (Buckeyes Terminals, LLC) Access obtained for PD-7 related tasks.
- o 726 Court St. (621-136) (RTA3) (Buckeyes Terminals, LLC) Access obtained for PD-7 related tasks.
- o 175 Van Dyke Street (595-250) (off the Canal) (175 Van Dyke LLC) Short-term use of boat ramp

## • Access agreements have been delivered to the following properties:

- o 595 Smith St. (489-1) (RTA3) (Red Hook Developers Holdings, LLC and CF Smith, LLC) The RD is coordinating with the EPA to directly reach out to the property.
- o 611 Smith St. (491-1) (RTA3) (Red Hook Developers Holdings, LLC and CF Smith, LLC)
- o 627 Smith St. (493-1) (RTA3) (Red Hook Developers Holdings, LLC and CF Smith, LLC)
- o 659 Smith St. (495-1) (RTA3) (Red Hook Developers Holdings, LLC and CF Smith, LLC)
- 691 Court St. (496-50) (RTA3) (Buckeyes Terminals, LLC) The RD Group has obtained access for PD-7 related activities and is coordinating to obtain access for other activities.
- o Gowanus Canal (624-100) (RTA3) (Buckeye Terminals)
- o 764 Court St. (496-1) (RTA3) (Buckeye Terminals)
- o 764 Court St. (624-1) (RTA3) (Buckeye Terminals)
- o 413 Bond St. (466, 17) (RTA2) (413 Bond Street LLC) The RD Group is coordinating with the Dillenbergers.

## • Phone conversations or initial meetings have taken place at the following properties:

- o 381 Smith St. (483-1) (RTA2) (381 Hamilton Ave Corp Ferrara Brothers)
- o 551 Smith St. (483-11) (RTA2) (381 Hamilton Ave Corp Ferrara Brothers)
- o 543 Smith St. (483-20) (RTA2) (539 Smith St. Realty Corp. /Benson Scrap Metal)
- o 230/232 3rd Street (formerly American Can)

## • Coordination with NYC is required/has been sought at the following properties:

- o Butler St. (411-14) (RTA1) (NYCDEP)
- o 2<sup>nd</sup> St.
- o 1st St. (east)
- o Former 1st St. Basin (west)
- o President St.
- o Sackett St.
- o Degraw St. (West)
- o Douglass St.
- o Bond St.
- o 2 2<sup>nd</sup> Ave. (977-3) (RTA2) (Sanitation)
- o Huntington St.
- o 2<sup>nd</sup> Ave.
- o Creamer St.
- o Smith St.
- o End of 19th St.
- o Union St. Bridge (NYCDOT)
- o Carroll St. Bridge (NYCDOT) and associated part of the bridge on 400 Carroll St. (452-15).
- o 3rd St. Bridge (NYCDOT)
- o 9th St. Bridge (NYCDOT)
- o Hamilton Ave. Bridge (NYCDOT)
- o 448 (or 488 on tax lot map) Hamilton Ave. (625-2) (RTA3) (NYCDOT)
- o 19<sup>th</sup> St. (625-250) (RTA3) (Sanitation)
- Smith St. (477-1) (RTA2) (Red Hook Concrete LOA) (leased by Red Hook Concrete LOA)

#### • EPA assistance is required and/or has been sought at the following properties:

- o 319 Bond St. (438-3) (RTA1) (426 President St.)
- o 426 President St. (445-20) (RTA1) (426 President St.)
- o 383 Carroll St. (445-11) (RTA1) (383 Carroll St., LLC)
- o 107 6th St. (990-151) (RTA2) (107 6<sup>th</sup> St., LLC)
- o 107 6th St. (990-153) (RTA2) (107 6<sup>th</sup> St., LLC)
- o 110 5th St. (977-1) (RTA2) (110 5th St. Priv.)
- o 110 5th St. (990-21) (RTA2) (110 5th St. Priv.)
- o 122 5th St. (990-16) (RTA2) (110 5th St. Priv.)
- o 107 6th St. (990-117) (RTA2) (107 6th St., LLC)
- o 36 2nd Avenue (990-160) (RTA2) (36-2nd-J Corp)
- o 593 Smith St. (487-1) (RTA3) (Mulerman-Aleksey)
- o 230 Huntington St. (477-8) (RTA2) (Red Hook Concrete LOA)

## 9) Meetings and Conference Calls

• No workshops were held between the RD Group and EPA during the reporting period.

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• Drinker Biddle held conference calls with EPA counsel on May 23, 2017 and May 30, 2017 to discuss template access agreements and related documents for distribution to property owners within the boundaries of the TB4 pilot study.

Status as of June 22, 2017

Document	Individual Work Element	Correspondence Status	Approval Status	Date of EPA Action
	PD-1: Quality Assurance Project Plan/Field Sampling Plan	Phone call between Geosyntec and EPA on 10/09/2014 to discuss QAPP	Approved on a task-specific basis.  EPA requested task-specific QAPP documents rather than one QAPP that addresses all the PDs for review facilitation purposes.	10/09/14
	PD-2: Health and Safety Plan	Phone call between Geosyntec and EPA on 10/09/2014 to discuss HASP	Not subject to EPA approval per EPA direction.	10/09/2014
	PD-3: Additional Debris Reconnaissance for Debris Removal	All comments addressed by RD Group	Approved. Final PDWP document submitted 09/02/14 incorporating EPA comments on this work element.	09/26/2014
Gowanus Canal Pre-	PD-4: Plan for Debris Removal, Decontamination	All comments addressed by RD Group	Approved. Final PDWP document submitted 09/02/14 incorporating EPA comments on this work element.	09/26/2014
Design Work Plan (PDWP)	PD-5: Detailed Survey and Assessment of Existing Bulkheads for Remedy Implementation	All comments addressed by RD Group	Approved. Final PDWP document submitted 09/02/14 incorporating EPA comments on this work element. See Detailed Work Plan section for further developments.	09/26/2014
	PD-6: Plan for Staging Site Selection and Implementation	No comments received from EPA on this work section	Approved. Final PDWP document submitted 09/02/14 incorporating EPA comments on this work element. See Detailed Work Plan section for further developments.	09/26/2014
	PD-7: Evaluation of Potential Groundwater Upwelling Areas and Measurement of Discharge	All comments addressed by RD Group	Approved. Final PDWP document submitted 09/02/14 incorporating EPA comments on this work element. See Detailed Work Plan section for further developments.	09/26/2014
	PD-8: Evaluation of Potentially Mobile NAPL in Native Sediments	RD Group received conditional approval of PD-8 and additional comments from EPA on November 6, 2014. Written and verbal comments from EPA has been received after November 6, including on 12/16/14 regarding EPA's request for RD Group to conduct ISS investigation work as developed by EPA/CH2M Hill.	Conditionally Approved. Final PDWP document submitted 09/02/14 incorporating EPA comments on this work element.  See comments on scope changes under Detailed PD-8 Work Plan.	12/16/2014
	PD-9: Additional Sampling for Polychlorinated Biphenyls	RD Group responded on 09/09/2014 to EPA comments. On 11/17/14 EPA clarified that they do not assign a high priority to this task at this stage. At 11/20/14 workshop agreement was reached that PD-9 sampling scope will be defined and submitted to EPA for approval. At 02/19/14 workshop it was verbally directed by EPA that PD-9 be removed from the RTA1 schedule and sampling efforts be focused on high PCB concentrations in the 7th Street turning basin. RD Group has removed the work scope from the RTA1 Schedule provided on 04/08/15.	Removed from Work Scope.	02/19/2015
	PD-10: Stabilized Material Use and Treatability Testing	EPA comments received on 11/17/14 request combining PD-10 with PD-21 and (re) submitted in a single work plan. RD Group agreed with the combination of the work elements in the Response to EPA Comments submitted on 09/09/2014 and during the 20 November 2014 Workshop. Work elements PD-10 and PD-21 combined in PDWP Attachment B Partial Final submitted to EPA on 02/13/15.	Approval from EPA on 02/23/15 based on RD Group submission of PDWP Attachment B Partial Final on 02/13/15.  See Detailed Work Plan section for further developments.	02/23/2015
PDWP	PD-11: Study of Canal Operations	RD Group responded on 09/09/2014 to EPA comments	Approved. Partial Final PDWP Attachment B submitted on 10/14/14 incorporating EPA comments on this work element.	09/26/2014
Attachment B	PD-12: Groundwater Model Update	On 11/17/14 EPA stated that they reserve comment for this task until it can be discussed at the upcoming 11/20/14 Workshop. Follow-up call between Geosyntec and CH2M Hill resulted in several action items and scope requests by CH2M Hill that are currently still being resolved. Geosyntec sent responses to scope requests to CH2M Hill on 12/11/14.	Conditionally Approved.  Approval was provided for PD-12 by EPA on 02/23/15 contingent upon satisfactory incorporation of the inputs that were provided by EPA's contractor, CH2MHill and text "this work element will be revised as needed based on future refinements of the groundwater model and in consultation with EPA."	02/23/2015
	PD-13: Upland Area Evaluation of Cutoff Walls	RD Group responded on 09/09/2014 to EPA comments. Additional EPA comments expected by RD Group per EPA email on 09/26/14, but comments have not been received to date. EPA commented on 11/20/14 in workshop that EPA would provided written direction on how to proceed with task. Written direction has not ye been received. On 02/23/2015 EPA requested that PD-13 be resubmitted for the focused upland investigations around the 4th/5th Street Basin and 6th/7th Basins as discussed at the 02/19/2015 Workshop. On 08/26/15 EPA requested information related to which uplands the RD Group were planning on investigating, and to what extent, in TB4/5 and RTA1.	In response to EPA's request on 08/26/15, at the workshop on 09/09/15 the RD Group provided nexus packages for RTA1 and TB4/5 locations which showed select contaminant concentrations in the upland	08/26/2015

Status as of June 22, 2017

Document	Individual Work Element	Correspondence Status	Approval Status	Date of EPA Action
	PD-14: Compliance Plan for Federal and State Archeological Requirements	Responses provided by RD Group to EPA comments.	Approved. Partial Final PDWP Attachment B submitted on 10/14/14 incorporating EPA comments on this work element.	09/26/2014
	PD-15: Laboratory Evaluation of NAPL Mobility	RD Group responded on 09/09/2014 to EPA comments	Approved. Partial Final PDWP Attachment B submitted on 10/14/14 incorporating EPA comments on this work element.	09/26/2014
	PD-16: Revisions to Sediment and Hydrodynamic Models	RD Group responded on 09/09/2014 to EPA comments	Approved. Partial Final PDWP Attachment B submitted on 10/14/14 incorporating EPA comments on this work element.	09/26/2014
	PD-17: Evaluation of Active Cap Treatment Technologies	RD Group responded on 09/09/2014 to EPA comments. On 11/17/14 EPA stated that they would like to discuss the scope of the work and RD Group's responses to comments. At the 11/20/14 workshop EPA provided information on work they are conducting, but did not provide additional comments related to PD-17 scope nor approval of the general work element for RD Group to develop detailed work plans. Revision of this work element was provided in the Partial Final PDWP Attachment B submitted to EPA on 02/13/15. RD Group responded on 6/2/2015 to EPA comments. At the 05/13/15 and 06/11/15 meetings EPA indicated approval would be forthcoming.	Approved.  On 6/18/15 EPA provided approval for thePD-17 Work Plan scope excerpt submitted on 6/2/15 contingent upon the summary of PD-17 communications being appended to the PD-17 Work Plan scope, and preparation and addition of a table specifying the work element under which the data mentioned in the revised "summary of communications of PD-17" document will be collected. The revised PDWP Attachment B was provided, compliant EPA's requests, on 6/29/15.	6/18/2015
	PD-18: Geotechnical Characterization for Cap Design	RD Group responded on 09/09/2014 to EPA comments	Approved. Partial Final PDWP Attachment B submitted on 10/14/14 incorporating EPA comments on this work element. See Detailed Work Plan section for further developments.	09/26/2014
PDWP Attachment B	PD-19: Laboratory Evaluation of ISS Performance	RD Group responded on 09/09/2014 to EPA comments. EPA stated on 11/17/14 that they "EPA will not review any documentation on this task since it has already completed its own laboratory evaluation of the ISS and is about to conduct the ISS pilot study." EPA stated they will provide RD Group the opportunity to comment on EPA's ISS work plans and other relevant documentation. Some components of RD Group's PD-19 scope have been incorporated into EPA's Technical Plan for Pre-Pilot Investigation and ISS Pilot Testing. RD Group has removed the work scope from the RTA1 Schedule provided on 04/08/15.		11/17/2014
	PD-20: Technical Workshops	On 11/17/14 EPA stated that Technical Workshops are not a remedial design element and workshops will be held on an as-needed basis.  Earlier comments from EPA on PD-12, received by RD Group on 08/01/14 have requested that Technical Workshops be included in the Remedial Design schedule. Comments from EPA on PD-20 received on 08/01/14 indicate the need for several technical workshops.	Approved. Partial Final PDWP Attachment B submitted on 02/13/15 incorporating EPA comments on this work element.	2/23/2015
	PD-21: Sediment Stabilization and Treatment Technologies Treatability Studies	To be combined with PD-10. See comments under PD-10	Approved. See comments under PD-10	02/23/2015
	PD-22: Bathymetric Survey after Flushing Tunnel Operation	RD Group responded on 09/09/2014 to EPA comments	Approved. Partial Final PDWP Attachment B submitted on 10/14/14 incorporating EPA comments on this work element.	10/2/2014
	PD-23: Dredge Volume Field Study	No comments received from EPA on this work section	Approved. Partial Final PDWP Attachment B submitted on 10/14/14 incorporating EPA comments on this work element.	09/26/2014
	PD-24: Propeller Wash and Cap Armoring Study	RD Group responded on 09/09/2014 to EPA comments	Approved. Partial Final PDWP Attachment B submitted on 10/14/14 incorporating EPA comments on this work element.	09/26/2014
	PD-25: Design CSM Refinement	RD Group responded on 09/09/2014 to EPA comments	Approved. Partial Final PDWP Attachment B submitted on 10/14/14 incorporating EPA comments on this work element.	09/26/2014

Status as of June 22, 2017

Document	Individual Work Element	Correspondence Status	Approval Status	Date of EPA Action
PDWP Attachment B	PD-26: Basis of Design Report	On 11/17/14 EPA stated that they prefer separate Basis of Design Reports be prepared and submitted for the individual design elements. The request was restated at the 11/20/14 technical workshop. EPA comments were incorporated into PDWP Attachment B Partial Final submitted to EPA on 02/13/15.	Conditionally Approved.  Final Approval of general work scope expected from EPA with submission of Partial Final PDWP Attachment B on 02/13/15 which incorporates EPA comments. EPA stated that approval is subject to a separate Basis of Design (BOD) be developed for the 4th/5th Street Basin and RTA-1 work. EPA also requested the BOD will be updated following the data collection and analysis of the different PD elements.	02/23/2015
	Introduction and Background	EPA by RD Group on 04/08/15. EPA provided comments on 06/19/15 stating they were prepared to provide approval to the RDWP following removal of the schedule and any diagrams or references to the schedule.	Approved.	7/2/2015
	Bulkhead Repair or Replacement Comments			
	Excavation/Restoration of the Fifth Street Turning Basin	Resubmission of RDWP consistent with EPA comments 06/24/15.		
	Dredging	Revised Dredging Related Activities portion of the RDWP submitted to EPA by RD Group on 06/02/15.  Received comments on the Dredging Related Activities portion of the RDWP on 06/25/15.		
	Capping			
Remedial Design	ISS			
Work Plan	Ex Situ Sediment Treatment	All comments addressed by RD Group. Revised RDWP and Schedule submitted to EPA by RD Group on		
	Dredge Water Treatment	04/08/15. EPA comments on RDWP on 6/19/15 and requested resubmission for approval. Resubmission on 06/24/15.  No comments received from EPA on these work sections. Revised RDWP and Schedule submitted to EPA by		
	Dredging and Capping Support Site Development	No comments received from EPA on these work sections. Revised RDWP and Schedule submitted to EPA by  RD Group on 04/08/15. EPA comments on RDWP on 6/19/15 and requested resubmission for approval.  Resubmission on 06/24/15.		
	Source Control Action Design			
	Regulatory Requirements			
	Green Remediation			
	PD-4: Debris Management Plan	Submitted to EPA on 10/30/15. Comments received from EPA on 11/19/15. Revised work plan and response to comments submitted on 12/14/15. EPA approval provided on 12/17/15.	Approved.	12/17/2015
	PD-5: Pilot Study Work Plan for Bulkhead Assessment	Submitted to EPA on 11/18/14. Comments received from EPA on 12/22/14. Response to Comments submitted on 01/12/15. Final detailed work plan submitted 01/20/15.	Approved.	01/21/2015
Detailed Work Plans and QAPPs	PD-5: Survey and Assessment of Existing Bulkheads	Submitted draft to EPA on 02/09/15. Submitted Final Detailed Work Plan for PD-5 on 3/26/15. Submitted RLSO version and revised PD-5 work plan on 6/24/15.	Approved.	07/02/15
	PD-6: Staging Site Selection and Implementation Plan	RD Group submitted the PD-6 Staging Site Selection and Implementation Plan to EPA on 01/19/15. EPA has commented verbally that they do not plan to approve the WP since Citizens has been identified as a staging site.		
	PD-7: Evaluation of Potential Groundwater Upwelling Areas and Measurement of Discharge	Draft and Final Detailed Work Plans were submitted in October 2015.	Approved.	11/6/2014
Detailed Work Plans and QAPPs	PD-8: Evaluation of Potentially Mobile NAPL in Native Sediments	RD Group submitted Detailed Work Plan for PD-8 on 11/25/14. EPA Comments received by RD Group in November and December 2014 regarding detailed work scope. Expansion of general PD-8 work scope and schedule requested by EPA. EPA written comments received on 12/22/14. Response to EPA Comments submitted on 01/12/15. EPA provided new direction related to work element PD-8 via email on 14 January 2015, in response to information on driller and TarGOST/CPT subcontractor availability provided by RD Group on 06 January 2015. The sequence of PD-8 investigation activities was requested by EPA. RD Group agreed with the proposed sequence via email correspondence on 26 January 2015.	Conditional approval provided by EPA on 01/29/15 with need for the final version to incorporate EPA comments.  Final PD-8 Detailed Work Plan submitted on 02/09/15. Comments or written approval of Final Work Plan not provided by EPA.	01/29/2015
		Submitted to EPA on 3/5/15. Comments received from EPA on 3/20/15. Response to Comments and Final Work Plan submitted to EPA on 04/10/15.	Approved	5/20/2015

Status as of June 22, 2017

Gowanus Canal Superfund Site Brooklyn, New York

		Correspondence Status  Submitted to EPA on 7/31/2015. EPA provided comments on 9/16/2015. The RD Group provided responses to EPA comments and Final Work Plan on 10/12/15. EPA follow-up comments provided received by the RD Group on 10/29/15. RD Group Response to follow-up comments and Final Work Plan submitted to EPA on 11/05/15. EPA approval provided on 11/19/15.		Date of EPA Action 11/19/2015
	PD-17: Evaluation of Active Cap Treatment Technologies	Submitted to EPA on 7/24/2015. EPA provided comments on 9/14/2015. The RD Group provided responses to EPA comments and Final Work Plan on 10/12/15. EPA follow-up comments provided received by the RD Group on 10/29/15. RD Group Response to follow-up comments and Final Work Plan submitted to EPA on 11/05/15. EPA approval provided on 11/19/15.	Approved	11/19/2015
	PD-18: Geotechnical Characterization for Cap and Dredge Design	Submitted to EPA on 11/18/14. Comments received from EPA on 12/22/14. Response to Comments submitted on 01/12/15.	Conditional approval provided by EPA on 01/26/15 with need for final version to incorporate EPA comments. Final Version Submitted to EPA on 02/13/15. Comments or written approval of Final Work Plan not provided by EPA.	01/26/2015
Detailed Work Plans and QAPPs	Pre-Design Investigations for 5th Street Turning Basin	RD Group submitted Work Plan on 08/27/15. EPA provided comments on 10/07/15 along with email correspondence requesting additional confirmatory borings "to characterize the extent of contamination within TB5 in order to determine the required extent of excavation of TB5." Responses to EPA Comments provided by the RD Group on 10/28/15. EPA correspondence on 11/09/15 requesting revision of the Work Plan. RD Group provided a letter to EPA on 11/16/15 requesting a combined technical/legal meeting to discuss the topic. EPA letter on 11/30/15 directing the work to be conducted. RD Group submitted revised Work Plan on 12/10/15. Comments received by EPA on 03/10/16. Directive from EPA to respond by 3/25/16. Response to comments, revised Work Plan, and QAPP submitted by RD Group on 03/25/16. Follow-up comments provided by EPA on 05/06/16 directing responses by 05/20/16. Email from EPA on 05/19/16 to allow for mobilization if Group agrees to provide comments by 05/31/16. RD Group provided revised Work Plan on 05/31/16 per EPA directive. RD Group emailed EPA on 06/15/16 inquiring about the approval status of the Work Plan with field work scheduled for the following week (06/23/16). On 06/15/16 EPA responded with additional revisions to the document and noted that the document was not yet approved. Following conversations between the RD Group and Brian Carr, alternative language was provided on 06/17/16 by Brian Carr which superseded EPA's comments on 06/15/16. The RD Group provided a revised version of the Work Plan on 06/20/16 and followed up with an email on 06/22/16 inquiring on the approval status of the Work Plan. On 06/22/16 EPA noted that revisions were not acceptable and that no work is to be performed until EPA approval is provided. The RD Group provided a revised version of the Work Plan, a cover letter requesting a combined legal and technical meeting to further discuss the scope of work was included. On 06/27/16 the RD Group resubmitted the TB5 Work Plan. On 06/28/16 EPA provided written approval of the work.		06/28/2016
	Supplemental Pre-Design Investigations for 5th Street Turning Basin	RD Group submitted a supplemental Work Plan for pre-design investigations at TB5 on 11/18/16 based on discussions with EPA at the technical workshop on 10/20/16. EPA comments provided on 12/13/16. RD Group Responses to EPA Comments submitted to EPA on 12/23/2016.	EPA provided apporval on 03/02/17.	03/02/2017

Note:

Conditional Approval by EPA pending resolution of issues and/or finalization of detailed work plans Highlighted items represent tasks still requiring EPA approval

## TABLE 2

## INVESTIGATION AND DESIGN REPORT APPROVAL TABLE

Status as of June 22, 2017

Document	Individual Work Element  PD-7: Evaluation of Potential Groundwater Upwelling Areas and Measurement of Discharge	RD Group to EPA on 11/13/15. EPA provided comments on the report on 11/19/15. RD Group provided Response to comments on 01/04/16 and requested data on 01/08/16.	Approval Status  Conditionally Approved. EPA provided conditional approval on 01/21/16 provided that the RD Group make the necessary revisions in the PD-7 documentation, incorporate EPA's recommendations into the methodology going forward, and submit the revised documentation acknowledging the changes. Final Report submitted by RD Group on 02/25/16	
	PD-5: Detailed Survey and Assessment of Existing Bulkheads for Remedy Implementation (Phase 1 Reports)	Investigation report submitted by RD Group to EPA on 11/13/15. EPA provided comments on the report on 02/12/16. RD Group submitted responses to comments and revised reports on 04/20/16. Approved by EPA on 05/05/16.	Approved on 05/05/16.	05/05/2016
	PD-5: Detailed Survey and Assessment of Existing Bulkheads for Remedy Implementation (Phase 2 Reports)	Select investigation reports for properties (Block 979 Lots 18, 23, and 31) in adjacent to TB4 submitted by RD Group to EPA on 06/02/16. Remaining Phase 2 investigation reports submitted on 06/29/16. Investigation report for the 420 Carroll Street property was submitted by the RD Group on 10/6/2016.	Awaiting EPA comments and/or approval.	
	PD-8: NAPL Mobility	A working draft of the PD-8 NAPL mobility report was submitted by the RD Group for EPA review on 10/7/2016. Appendix A (ERT Report), Appendix H (High-Resolution Photos), and Appenix J (TestAmerica Lab Reports) were submitted by the RD Group for EPA review on 10/13/2016. Discussion of report at technical workshop on October 20, 2016. Follow-up items provided by the RD Group to EPA on 12/05/16. EPA provided general comments on the Draft PD-8 NAPL Investigation Report on December 28, 2016. EPA provided requests for revisions to PD-8 TarGOST - PFS data set model on 01/30/2017. During the technical meeting between the RD Group and EPA on February 23, 2017, responses to EPA's questions on the Draft Report were discussed and presented by the RD Group. EPA requested that model-excluded polygon locations be provided in a table and Thiessen polygon figures and associated pie graphs be prepared utilizing 300% RE. The RD Group provided these to the EPA on March 22, 2017. Following this, on March 27, 2017 the EPA clarified that Thiessen polygon figures with pie charts based on a 244% RE TarGOST value were also requested. The 244% RE figures were provided to EPA on March 28, 2017. During the February 23 technical meeting, EPA stated they would provide a final determination of PD-8 findings after receiving the requested information.		
Gowanus Canal Investigation Reports	PD-10/21: Dredged Material Stabilization and Dewatering Treatability Study	Investigation report submitted by RD Group to EPA on 6/22/16. EPA provided comments on 07/28/2016. Resubmitted by the RD Group on 09/15/16. EPA request on 02/01/17 for additional discussion of acceptance criteria for thermal treatment and beneficial reuse. Revised document provided to EPA on 02/24/17. On 05/08/2017 EPA requested additional information on the addendum provided on 02/24/17. The RD Group responded on 05/16/17 with the requested information. The RD Group submitted the revised addendum to the PD-10/21 report on 5/17/17.		05/22/17
	PD-14: Compliance Plan for State and Federal Archaeological Requirements	Historical research on the sunken vessel in TB4 was provided by the RD Group to EPA on 03/25/16. EPA responded on 03/29/16 that the materials will be reviewed and coordinated when information is provided on other items of potential cultural significance. The RD Group uploaded historical research information on several other items in the Canal on 06/15/16. On 06/15/16 the RD Group provided materials comprising the Archaeology Compliance Plan; specifically, the Area of Potential Effect, the Cultural Resources Monitoring Plan, and the Cultural Resources Mitigation and Treatment Plan. EPA provided SHPO concurrence letter for sunken vessel in TB4 on 07/13/16 which provides SHPO concurrence that the sunken vessel is not a significant cultural resource. EPA, SHPO, and the RD Group coordinated on revisions to PD-14 materials based on comments received 07/18/16. RD Group resubmitted materials on 09/02/16.  In August 2016 the RD Group, EPA, and John Vetter agreed to draft a Programmatic Agreement (PA) to guide and streamline future cultural resource management activities for remediation efforts on the Canal. On September 21, 2016, AHRS submitted an outline of the PA for John Vetter and the RD Group to review. Upon John Vetter's review and comment of this outline on October 04, 2016, AHRS provided the initial draft of the PA to John Vetter and the RD Group for review on January 19, 2017.		07/18/16

# TABLE 2 INVESTIGATION AND DESIGN REPORT APPROVAL TABLE

Status as of June 22, 2017

Document	Individual Work Element	Correspondence Status	Approval Status	Date of EPA Actio
	PD-15: Laboratory Evaluation of NAPL Mobility by Ebullition	Draft PD-15 Laboratory Evaluation of NAPL Mobility by Ebullition was submitted by the RD Group to EPA for review on 10/6/2016.	EPA comments provided on 02/01/17. RD Group response to EPA comments provided on 4/18/17. EPA approved on 05/08/17	05/08/17
	PD-17: Active Capping Treatability Study	Draft PD-17 Investigation Report was submitted by the RD Group to EPA for review on 12/22/16.	EPA comments provided on 02/01/17. RD Group response to EPA comments provided on 4/18/17. EPA approved on 05/10/17	05/10/17
	PD-18: Cap and Dredge Design Geotechnical Investigation	Investigation report submitted by RD Group to EPA on 12/09/15.	Approved on 02/12/16.	2/12/2016
	PD-4: Plan for Debris Removal, Decontamination	Document submitted by RD Group to EPA on 10/30/15. EPA provided comments on the report on 11/19/15. RD Group submitted Response to Comments and Final Plan on 12/14/15.	Approved on 12/17/15.	12/17/2015
	RD-22: Noise and Vibration Report	Document submitted by RD Group to EPA on 11/23/15. EPA provided comments on the report on 02/12/16. RD Group submitted revised documents and response to comments on 04/12/16. Approved by EPA on 05/05/16.	Approved on 05/05/16.	05/05/2016
	Basis of Design Report Sections on Dredging, Sediment Treatmen Staging	Document submitted by RD Group to EPA on 1/21/16. EPA provided comments on the report on 03/10/16. RD Group submitted responses to comments and revised sections on 03/25/16. EPA follow up comments received on 05/06/16 with responses directed to be returned by 05/27/16. On 05/27/16 the RD Group submitted the Final Basis of Design Report (BODR) documents for Sections 1-4 and Section 8 that with a Response to Comments document. EPA provided approval of Sections 1-4, 8 on 06/17/16.	Approved on 06/17/16.	06/17/2016
	Basis of Design Report Sections	Documents submitted by RD Group to EPA on 04/15/16.  EPA comments on Water Treatment, Environmental Management, and RA Schedule sections provided on 05/20/16. RD Group provided revised version of Water Treatment and Environmental Management sections on 08/02/16. The revised version of the RA Schedule section was provided by the RD Group on 9/14/16. EPA follow-up comments on Environmental Management BODR Sections 5 and 11 on 09/21/16. RD Group submitted revised version of Water Treatment BODR section on 10/5/2016.	No further EPA comments or approvals provided. Superseded by submission of 35% design reports on 10/31/16 (water treatment, environmental management, RA Schedule) and 12/23/16 (SS and capping).	06/29/2016
		EPA comments on ISS section provided on 6/17/16. EPA comments on Capping section provided on 6/16/16. RD Group provided revised version of ISS section on 09/02/16. RD Group provided revised version of Capping section on 09/16/16.		
		RD Group submitted Temporary Shoring BODR on 09/23/2016.  RD Group submitted TB5 BOD on 07/12/16. EPA provided comments on the TB5 BODR on 07/29/2016. RD provided revised version of TB5 BOD to EPA on 09/16/16.		
	35% Design Report Outline	Documents submitted by RD Group to EPA on 04/15/16.	No EPA comments and/or approvals provided. Superseded by submission of 35% design report on October 31, 2016.	r
Gowanus Canal Design Reports and Documents	35% Design Report	Rev A documents submitted by RD Group to EPA on 10/31/16, including Appendix A (Rev A Preliminary [35%] Drawings), Appendix B (Rev A Calculation Packages), Appendix C (Construction Quality Assurance Plan [CQAP]), Appendix D, and Appendix E (Pre-Design [PD] Reports). EPA comments provided on 35% design for Dredging, Water Treatment, and Sediment Treatment on 12/13/16. RD Group provided responses to EPA comments on 35% design for Dredging, Water Treatment, and Sediment Treatment on 01/04/2017.  Rev B documents submitted by RD Group to EPA on 12/23/2016, including 35% Design Report sections on ISS and Capping along with Appendix A, (Rev B Preliminary Drawings) Appendix B (Rev B Calc packages), Appendix D, and Appendix E.	RD Group Reponses to EPA Comments on 35% Design for Dredging, Water Treatment, and Sediment treatment were submitted on 01/04/2017. EPA Follow-up comments were provided on 02/01/17. No further correpondence is necessary until the 65% design stage.  EPA comments on ISS and capping sections provided on 02/01/17. RD Group Responses to EPA comments in development.	02/01/17
	Site Staging and Debris Removal Permitting Packages	Documents submitted by RD Group to EPA on 08/09/2016. Approved on 09/06/16	Approved.	9/6/2016

## TABLE 2 INVESTIGATION AND DESIGN REPORT APPROVAL TABLE

Status as of June 22, 2017

Gowanus Canal Superfund Site Brooklyn, New York

Document	Individual Work Element	Correspondence Status	Approval Status	Date of EPA Action
	TB4 Design Memoranda	Documents submitted by RD Group to EPA in November 2016, with EPA decisions on critical path items assumed for 12/27/16. Memoranda included proposals for TB4 Pilot Study lateral boundaries, dredge depth, bulkhead support approach, and schedule. Memoranda were discussed at at technical workshop between the EPA and RD Group on 12/15/16. The TB4 Pilot Study Boundary memo was revised, per discussion with EPA, and resubmitted by the RD Group on 01/05/2017. Drawings and specifications related to the TB4 50% Design Report were submitted on 3/1/2017. Calculation packages supporing the TB4 50% Design Report were submitted on 3/3/2017. The Dredge Sediment and Waste Management specification, the Dredge Water Treatment System Requirements specification, the Water Treatment Equipment Sizing Estimates calculation package, and the working draft of the Statement of Work specification were submitted on 3/14/2017. A memorandum regarding the structural limits of cantilevered bulkhead supports was submitted on 3/28/2017.		3/24/2017
	TB4 Design	TB4 50 %Design submitted by the RD Group to EPA on 03/01/17 with follow-up submittals on 03/03/17 and 03/14/17. EPA comments received on 03/24/17. RD Group response to comments provided to EPA on 04/07/17. EPA follow-up comments received by RD Group on 5/12/17. RD Group responses to EPA follow-up comments provided to EPA on 05/19/17.  TB4 100% Design submitted by the RD Group to EPA on 05/19/17.  Permitting package provide to EPA on 06/05/17.	EPA approvided drawings indicating hot-spot excavation polygons for TB4 dredging pilot. EPA correspondence on 05/19/17 stated that EPA would provide comments on the TB4 100% Bulkhead design on 05/26/17, and approval of the TB4 100% dredging and capping design on 05/26/17.  EPA Comments on Bulkheads portion of TB4 100% Design provided on 05/31/17. Responses to EPA comments provided by RD Group to EPA on 06/07/17. EPA follow-up comments received 6/13/17 with clarification received 6/14/17. Responses in preparation by RD Group.  EPA Comments on Dredging and Capping portion of TB4 100% Design provided on 06/01/17. Responses provided to EPA 6/08/17. EPA follow-up comments received 6/14. No further action from RD Group required.	6/14/2017

Note:

Conditional Approval by EPA pending resolution of issues and/or finalization of detailed work plans
Highlighted items represent tasks still requiring EPA approval